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March 19, 1996

Via Federal Express

David S. Guzy
Rules and Procedure Office
Royalty Management Program
Minerals Management Service
Denver Federal Center, Bldg. 85
P. O. Box 25165, Mail Stop 85
Denver, CO 80225-0165

Re: Valuation of Oil From Federal and Indian Leases, 60 Fed. Reg. 65610 (December 20, 1995)

Dear Mr. Guzy:

Section One: INTRODUCTION

The City of Long Beach, on behalf of the State of California, hereby responds to the Notice placed in the Federal Register by the Mineral Management Service (MMS), United States Department of Interior, on Wednesday, December 20, 1995, for comments concerning the Valuation of Oil From Federal and Indian leases.

We are in agreement with the response by the Western States Lands Commissioners Association - Royalty Management Committee, Maurice Lierz, Chairman, especially with regard to the discussion of the underpricing of California postings. We will not here repeat the points made in that response. The additional points we want to make are as follows:

(1) Evidence obtained in the Long Beach case further establishes the fact that California postings are underpriced.

(2) We recommend the elements of a pricing formula for California crude oil royalty valuation.

(3) We recommend that there not be a separate pricing methodology for (A) crude oil which is sold pursuant to arm's-length contracts and (B) crude oil which is not sold pursuant to arm's-length contracts. We recommend instead that royalties be based on the highest of (C) received value and (D) an approach based on a marker crude (such as ANS spot prices on the West Coast).

Section Two: THE CALIFORNIA CRUDE OIL MARKET

A. West Coast Crude Supply

California refinery supply is composed of about 50 percent California production, 40 percent Alaska North Slope (ANS) and the rest foreign crudes, principally light, sweet crudes.

B. The Majors Control The West Coast Oil Market

The West Coast crude oil market is highly concentrated, permitting a few oil companies to control crude oil posted prices. The West Coast market is dominated by seven major producer-refiners: Chevron, Texaco, Exxon, Unocal, Mobil, Shell and Arco. These majors dominate all aspects of the petroleum industry in California: production, transportation, crude oil pricing and refining.

C. Production And Refining

The majors control about 67% of crude oil production, DOE and Long Beach control approximately another 11%, and independent producers control the remaining 22%. The majors account for 80% of total California refining and 85% of the total runs to still.

Competition between the majors and independent refiners has diminished over the last 15 years as a result of the fact that many of the independents went out of business, because of inability to procure crude supply. Many of the independents that still remain in business produce specialized products, such as asphalt, which limit their refining needs to poor quality grades of crude oil.

The majors have installed coking, fluid catalytic cracking (FCC) and desulpherization facilities in their California refineries. Their refineries are capable of converting heavy California crudes to valuable, light products. California refiners are able to convert 85 percent of their crude oil slate to gasoline, jet fuel and diesel.

D. Pipelines

The Majors control the pipelines and thereby crude oil prices in California. Under California law as interpreted by the Majors, privately owned pipelines have no duty to transport crude for others. The Majors maintained that owners of private pipelines may refuse transportation to crude producers or require that producers sell their crude to the pipeline owner as a condition of access. Producers have only three options: (1) leave their crude oil in the ground; (2) transport their crude by truck thereby incurring large additional costs; and (3) selling it to a pipeline owner. Pipeline owners typically require that sales be made at posted price.

Many of the California pipelines were dedicated as common carriers in 1992 pursuant to settlements in a lawsuit brought by the City of Long Beach and the State of California. Even now,

however, the three heated pipelines, which are the only economical way of transporting the heavy crude oil production in the San Joaquin Valley to market, are private carriers. Producers' sales to the owners of these heated pipelines are not on arms'-length contracts because producers have no viable alternative but to sell at the price offered by the pipeline owners.

E. Posted Price

Only six companies post prices in California: Chevron, Mobil, Unocal, Texaco, Enron and Koch. All of the majors, including the non-posters, use the four postings as the basis for payment of royalties and taxes. The Majors, however, almost never sell crude oil outright at posted price. Independent refiners nearly always pay a bonus over posted price for their crude supply. Even some of the Majors pay bonuses over posted price. Postings are used as the pricing basis for only a small percentage of California production.

Posted prices in California are significantly lower than comparable crudes produced East of Rockies and Alaska North Slope crude oil which is run in large quantities in the majors' California refineries. Although refiners' crude oil costs are much lower in California than elsewhere in the United States, the refined product prices have been equal to or higher than refined product prices elsewhere in the United States. West Coast refinery profits are higher than elsewhere in the United States due to abnormally low California posted prices.

F. The Majors' Incentives Are For Low Posted Prices

All of the posters operating in California are net buyers of crude oil. When they sell crude oil, they almost always do so with offsetting purchases which preserves their crude supply. They sell crude outright only in those rare instances when they experience sudden, unexpected temporary disruptions to their transportation systems or refineries. Because they are net buyers, their profits increase when they pay less for their crude supply. Lower posted prices result in higher profits.

Section Three: CALIFORNIA POSTED PRICES ARE LESS THAN THE FAIR MARKET VALUE OF CALIFORNIA CRUDE OILS

We refer MMS to the general discussion of underpriced postings in the submission by the Western States Lands Commissions Association including comments that address underpricing of California postings. We wish to add the following comments based on evidence developed in the Long Beach case.

A. Admissions Of Underpricing By The Posters And Other Majors

Documents produced by the major oil companies to the City of Long Beach and the State of California in People of the State of California, et al., v. Chevron Corp., et al., contain numerous admissions that California posted prices were too low or underpriced throughout the 1980's. Many of these admissions were made in the context of comparing the posted price of California crudes to the landed cost of Alaskan North Slope crude oil. The documents show that major oil companies believed that the price of California crudes should be on a par with landed ANS crude. Because of confidentiality agreements entered into in the case, we

cannot discuss the details of these admissions, but the documents have been turned over to the interagency Task Force investigating West Coast prices.

B. The Major Oil Companies Paid Bonuses For California Crude Oils

The documents produced in the Long Beach case by the major oil companies and independent refiners show a consistent practice of payment of bonuses for California crudes. The refiners were willing to pay bonuses over posted prices from independent producers. Because of the confidentiality agreements in the Long Beach case, we cannot here disclose the details of the evidence that has been produced in the litigation.

C. Crude Oil Exchanges By The Majors Involving California Crudes For East Of Rockies Crudes Demonstrate That California Postings Were Below Market Value

The major oil companies frequently engaged in buy/sells in order to obtain the crude oils desired by their refineries. From time to time, the majors traded California crudes for crudes East of Rockies particularly in the Gulf area. In those buy/sells sales, the oil companies received a bonus over posted price for the California crude oils.

Section Four: RECOMMENDED PRICING FORMULA FOR CALIFORNIA CRUDE OIL ROYALTY VALUATION

We believe that the value of California crude oil for royalty purposes should be the highest of (A) received value and (B) an approach based on a marker crude: Alaskan North Slope (ANS) West Coast spot price. Received value for outright sales between unaffiliated companies does not need comment. We now address (B).

We have already discussed that the posted prices for California crude oils do not reflect market value and therefore should not be used as a basis for determining a royalty value for these crude oils. Instead we recommend that the market value of ANS crude oil be used as the "marker" or benchmark crude value. Other than California crude oils, ANS is the most widely consumed crude oil in California, and there exists a recognized and accepted market value for this crude oil in California. Having determined a marker crude value, adjustments can then be made to account for differences in quality (primarily sulfur and gravity) as well as transportation charges. Such a formula may be expressed as follows:

Lease value of California crude = (Market value of marker crude[s] +\- quality differential - GHT)

Most crude oil produced outside the United States is valued and sold in reference to one or more benchmark or marker crude oils. Over the last five to ten years this has become the most prevalent basis for the major oil producing nations to determine the market value of their crude oil production. Attachment A includes a list of the pricing terms and benchmark crude oils used currently in valuing oil production by most of the major producing nations around the world. Adjustments are made to the base crude value for differences in quality or location, but the approach to crude oil pricing is very similar conceptually to our proposed methodology. Even within the U.S. certain crude oils are valued in reference to one of more benchmark crude oils. We will discuss each of the elements of the proposed pricing formula

and how we propose that MMS should administer this pricing formula for California crude oil.

A. Marker Crude Value

Alaskan North Slope (ANS) crude oil is the most widely traded crude oil among third parties on the West Coast. Unlike California crude oils, ANS is widely traded in the closest approximation we presently have to true arm's-length transactions among various third parties, and a readily known and available market price exists for ANS delivered on the West Coast. This spot price is published in various sources such as Platt's, Petroleum Intelligence Weekly (PIW), Telerate, and Reuters. The spot price for ANS reflects the interaction of numerous buyers and sellers of ANS and is the best available indication of the market value for this crude oil delivered on the West Coast at any given point in time. Spot prices are used not only to value single month or single cargo deliveries, but are used as a pricing basis on many term contracts as well. Spot prices are now considered throughout most of the oil world to be the best indicator of market value.[1]

Although there is only one major ANS producer that is also a large seller of ANS, namely BP,[2] it is in BP's interest as a net seller of ANS on the West Coast to obtain as high a price as possible for that crude oil. Other companies (both smaller ANS

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[1]See for example, Petroleum Intelligence Weekly, "The Spot Market," June 1994.

[2]The two other major ANS producers are Arco and Exxon, both of whom run internally most of their ANS production. Other similar producers such as Phillips, Marathon, and Occidental also sell or trade their ANS production.

producers and trader/resellers) also engage in transactions as sellers of ANS and all of these transactions form the basis for the reported spot price of ANS on the West Coast.[3]

ANS is used as the benchmark crude oil on the West Coast by the major oil companies and is considered the marginal or swing crude supply. Refiners view ANS as the one crude oil that is available in adequate supply if needed to augment refinery runs. The oil companies use ANS as a basis for comparison in determining whether alternative crude supplies are economical, and they use the price of ANS to value California crude oils traded in arm's-length transactions. The spot price of ANS has also been used by one foreign producing country, Ecuador, as the pricing benchmark for sales of its Oriente crude oil which is imported into the West Coast.

Significant quantities of ANS are consumed in refineries located in California and ANS competes directly with California crude oils for a market on the West Coast. ANS accounts for almost 40 percent of total crude oil run in California refineries and approximately 60 percent of total ANS production is run in refineries on the West Coast. [California Energy Commission, "Quarterly Oil Report."] Because of the large market and diverse buyers of ANS on the West Coast, the spot price is currently a good approximately of its market value and may be expected to continue to reflect market value in the future. The price of ANS on the

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[3]In recent years, Arco, another major producer of ANS, has begun selling some to its ANS production on the West Coast, and these transactions are also included in the spot market value for ANS delivered on the West Coast.

West Coast is also tied to world market prices because over 100,000 b/d is sold on the West Coast in transactions in which the price of ANS is tied to the NYMEX price of West Texas Intermediate (WTI) delivered at Cushing with adjustments for location and quality. [Petroleum Intelligence Weekly, "Crude Oil Handbook, The Spot Market," June 1994.]

In establishing a formula price that is tied to ANS, one must consider, however, whether ANS will remain a viable benchmark for the West Coast market in the future, especially if royalty values are tied to the spot market value of ANS. Several major refiners such as Shell, Texaco and Chevron consume significant quantities of ANS on the West Coast and might be in a position to manipulate the price if they believed it were in their interest to do so. The long history of underpricing of crude oil on the West Coast and the relatively concentrated structure of the industry there raises concerns about continued manipulation of pricing. Also the lifting of the export ban on ANS crude oil may encourage the flow of substantial volumes of ANS to the Far East which could also threaten the viability of ANS as a benchmark on the West Coast.

Although issues of concern, we do not believe that in the near term they are sufficient to invalidate the use of ANS as a benchmark for California crude oils. The market for ANS on the West Coast includes buyers and sellers other than the major producers of California crude oil, and BP, a major seller of ANS on the West Coast does not own crude oil production in California and therefore does not pay royalties on federal oil produced in

California. Thus it is unlikely that BP has an incentive to discount its sales of ANS on the West Coast. Also the market for ANS on the West Coast includes sufficient other market participants, particularly traders and resellers, so that it is difficult to imagine that the spot price could be seriously manipulated. Second, although some ANS crude oil is now likely to be exported, most of the export volume is likely to come from the volumes of ANS that heretofore had been sent to the U.S. Gulf Coast market area. To the extent that ANS volumes are displaced from the West Coast, this will only tend to drive up the price of ANS delivered to the West Coast since supply is restricted and demand remains the same (or may increase in the future as California production declines). Given the expected demand for ANS crude of over 900,000 b/d on the West Coast for the foreseeable future, it is unlikely that this market would become so thin so that it would no longer reflect a market value.

Nevertheless, as a protection against the possible manipulation or decreased importance of ANS as a marker crude oil on the West Coast, we would suggest that a test be used to ensure that the spot price of ANS continues to reflect market value. This test would establish a floor value for ANS that would trigger the use of an alternative pricing mechanism only if the monthly reported spot price of ANS fell below this floor value. This floor value would be derived in two steps. First, we would apply the historical relationship between the spot price of ANS and the WTI prompt futures value and if the difference between WTI and ANS was greater than all but 10 percent of the monthly differences observed

over a five year period, then an alternative pricing mechanism would be employed. For example, suppose in a given month the price difference between ANS and WTI is $4.00 per barrel and review of the monthly price differences between ANS and WTI for the last five years indicated that in less than 10 percent of the observations the price difference was more than $4.00; this would trigger the application of an alternative valuation procedure.

The second step of the test would involve the application of a "market basket" of several crude oils to derive a benchmark value for ANS on the West Coast when the spot price of ANS did not qualify. The market basket would include spot prices for Dubai, Oriente, WTS, and Line 63 crude oils in equal proportions as the basis for establishing this alternative benchmark value. With the possible exception of Line 63, these crude oils are traded in large volumes, prices are readily known and used in valuing other crude oils, and are all comparable in quality to ANS.[4] Although we do not believe that this pricing approach is as directly reflective of the West Coast marketplace as the use of the spot price of ANS on the West Coast, it does provide protection against the possible manipulation of the price of ANS delivered on the West Coast.

B. Quality Differential

Having established a benchmark or market value of the West Coast based on the spot value of ANS, the next step is to apply certain adjustments for differences in quality and location

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[4]These crude oil prices are also used by the State of Alaska in determining the market value for ANS for royalty purposes.

of California royalty production. Much of the crude oil produced in California is heavier in terms of API gravity than ANS crude oil and hence an adjustment for this difference in gravity must be made to properly reflect the lower value of heavy California crude oil. In addition, much of the Federal government's royalty oil is located offshore California in the OCS, and this crude oil tends to be considerably higher in sulfur than ANS oil.[5]

Certain quality differentials already exist in California which to some extent reflect market-based quality differences in gravity and sulfur, although they may not be perfect indications of gravity or sulfur value differences. One possible means for developing a quality differential that recognizes both sulfur and gravity differences is through the statistical analysis of spot prices of crude oils of different gravity and sulfur located in the same area. Regression analysis may be used to isolate the effect that sulfur and gravity differences have on price differences among crude oils of differing sulfur and gravity levels and thus derive market values for differences in sulfur and gravity. The problem with attempting to apply this type of analysis to crude oils on the West Coast is that insufficient data on spot prices and spot markets exist on the West Coast to develop such a model. Although such models could be developed based on California posted prices, we do not believe that these necessarily reflect market-based value differences for sulfur and gravity. As we have discussed the

[5]ANS crude oil delivered on the West Coast (i.e., delivered out of the Trans-Alaskan Pipeline System) is approximately 27°API with a sulfur content of 1.1 percent.

absolute levels of posted prices in California do not reflect market value, they can be manipulated by the posters, and there is absolutely no reason to believe that in the future when federal royalty values are at stake that these differentials will necessarily be an indicator of market value.

Spot prices are quoted at the same or similar location for certain crude oils in market areas east of the Rockies that could be used to derive sulfur and gravity differences. For example, both West Texas Intermediate (WTI) and West Texas Sour (WTS) crude oils are priced at Midland, Texas; WTI is lighter in gravity and sweeter (lower in sulfur) than WTS. Statistical analysis may be used to determine the differences in value which are attributable to gravity and sulfur respectively over a certain time period and these monetary value differences could then be applied to California crude oils. Obviously such a quality differential bears more directly on market conditions in the Gulf Coast than on the West Coast, but since such quality differences

> may have to be employed for royalty purposes in these markets, this may be an appropriate starting point for developing a quality differential to be applied to the West Coast as well.[6]

Another possible means for determining sulfur and gravity differences is to examine the gravity and sulfur banks used by various common carrier pipeline companies and shippers on such

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[6]Spot prices for LLS and HLS, Louisiana crude oils of different gravity levels but similar sulfur content could also be considered for use to derive a sulfur differential.

pipelines to account for differences in gravity and sulfur. For example, the Four Corners Pipeline Company maintains quality banks on several of its pipelines that operate in California which could be used as the basis for establishing a quality differential. For example, Line 63 which moves a blend of heavy and light crude oils from the San Joaquin Valley south to Los Angeles maintains a gravity bank to account for differences in crude oil quality received into and delivered out of the pipeline. Historically, there have been a significant number of shippers on this line and various different crude oils have been moved through this line which would tend to indicate that the gravity bank values do reflect market value and may not in the future be subject to manipulation.[7] Four Corners also adjusts the monetary value of the gravity bank on a regular basis as market conditions change and it has no vested interest in whether the differential is too high or too low since it is only shippers who are affected.[8]

Quality/gravity banks exist on other common carrier pipelines in California which could be used as a test to ensure that the Four Corners quality adjustment factors are not out of line with the market. These other lines include the All American Pipeline, the Ventura Pipeline System (operated by Mobil), and Chevron's California pipeline system.

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[7]Currently over 100,000 b/d of San Joaquin Valley and OCS crude oils are moved through Line 63 to the Los Angeles area.

[8]This same gravity bank is applied on other major lines operated by Four Corners such as Line 8 and Line 72.

Special consideration must be given to OCS royalty oil in California since most of this oil is high in sulfur (3-5% vs. 1% for the marker crude and most onshore California crude oil). Certain California pipeline systems do maintain separate sulfur banks for handling OCS crude oil which make a separate adjustment for differing levels of sulfur in crude oils received and delivered in these pipelines. The All American Pipeline which ships large quantities of OCS crude oil adjusts for differences in sulfur using a sulfur bank rate of $0.65 per one percent sulfur.[9] Celeron, the owner of All American, is not a significant oil producer on the West Coast and therefore is not as likely to be prone to manipulate this differential to the detriment of oil producers. We would recommend using this sulfur bank differential subject to periodic review that it reflected the market value for differences in sulfur.[10]

C. Adjustments For Location Differences

Finally, since the marker crude value (ANS) is quoted at refinery centers in San Francisco and Los Angeles, adjustments for transportation must be made to properly reflect the value of California crude oils at the lease. Most federal royalty oil in California is located in various fields in the San Joaquin Valley and in offshore (OCS) regions so adjustments for these locations is

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[9]See FERC #21, item 125.

[10]One test of the market value of sulfur is to compare the difference in value for low sulfur vs. high sulfur residual fuel on the West Coast. Prices for residual fuel oil are reported at 0.5 percent, 1.0 percent, and 3.0 percent sulfur levels and could be used to derive a sulfur differential using regression analysis.

most critical. We would propose adopting a standard set of location differential rates for various producing areas within California in order to simplify this adjustment procedure. These location factors are based in part on common carrier tariff rates for moving crude oils from producing areas to refining centers as well as other data the State has reviewed in the course of its review and analysis of oil company documents over the last fifteen years. We believe that royalty payors should be permitted to submit other data on transportation cost factors to justify higher location differentials if and only if it can be confirmed that such data represents true arm's-length costs involved in moving the oil under question to a major refinery center such as Los Angeles or San Francisco.

Section Five: **CRUDE SOLD ON ARM'S-LENGTH CONTRACTS SHOULD BE VALUED BY THE SAME METHODOLOGY AS CRUDE NOT SOLD ON ARM'S-LENGTH CONTRACTS**

The Notice in the Federal Register on December 20, 1995 asked for comments concerning pricing regulations relating to crude which is not sold pursuant to an arm's-length contract. Crude oil is crude oil and we believe that all crude oil, whether or not sold pursuant to an arm's-length transaction, should be valued according to the same methodology described in the previous section.

Our objections to having separate pricing regulations for crudes which are sold pursuant to an arm's-length contract are the following. The oil companies have a long standing practice of engaging in exchanges and reciprocal purchases and sales whereby the pricing provisions are not representative of the true market

price of the crudes involved in the transactions. The oil companies enter into very many exchanges or buy/sales using posted prices as the pricing basis for the crudes transferred. For reasons set forth in the submission by the Western States Lands Commissioners Association, these pricing provisions do not represent the market value of the crudes involved in those exchanges and buy/sells. Only in the case of outright purchases and outright sales do the pricing provisions stand a chance of reflecting the market value of crude.

It is easy for oil companies to avoid the effects of any pricing regulations concerning crude oil not sold under arm's length-transactions by engaging in exchanges or buy/sells for all or almost all their federal royalty crude oil. When MMS has two sets of pricing regulations, it encourages the oil companies to place their crude oil in that category which will cause them to pay the least amount of royalties.

A second reason to avoid separate pricing regulations for crude oil which is sold pursuant to arm's-length transactions is the difficulty, and in many cases the impossibility, of determining the sale price of royalty crude oil. Crude oil from royalty production is invariably mixed with other crude oils in pipelines and holding tanks. When a portion of the mixture is sold, it is difficult, it not impossible, to determine whether the royalty crude portion of the mixture was sold or not. Because of this tracing problem, oil companies can claim that royalty crude was sold when they receive a low price for a portion of the crude oil in pipelines or holding tanks and can claim that other crudes were

sold when they receive a high price for a portion of the crude oil in pipelines or holding tanks. There is no reason why MMS should have to guess at whether crude oil sales are attributable to royalty crude or not.

Thank you for consideration of these matters.

Sincerely,

James N. McCabe
Deputy City Attorney
City of Long Beach

JNM:tb

ATTACHMENT 1

Term Sales Price Determination - Major Oil Producing Nations

Country	Price Basis
Abu Dhabi	Formula tied to Dubai spot price w/ quality premium
Algeria	Brent spot + $0.50 quality premium
Angola	Brent spot less $1-1.75 quality discount
Argentina/Brazil	Brent or WTI spot
Cameroon	Brent spot less $1-1.50 quality discount
Canada	WTI spot/futures w/ quality adjustment
China	Minas (Indonesia) q/ quality adjustment
Colombia	WTI
Congo	Brent spot less quality discount
Dubai	Dubai spot; Mideast benchmark
Ecuador	ANS or WTS
Egypt	Market basket formula; Brent, Iran Hvy, Suez Bld. spot
Gabon	Brent spot
Indonesia	Market basket of 5 crudes from Asian Petroleum Price Index
Iran	Brent; Oman/Dubai spot prices
Kuwait	Arab Medium; ANS/WTI/WTS
Libyan	Formula tied to Brent
Mexico	Formula tied to WTS, ANS, LLS
Nigeria	Brent spot with quality differential
Oman	Govt established price; tied informally to Dubai spot
Qatar	Oman PDO
Russia	Brent spot with quality differential
Saudi Arabia	Geographic formula tied to benchmark crude in each region with quality/location differential. WTI/Dubai/Brent.

Source: Petroleum Intelligence Weekly.